

# AUSTRALIAN HYMENOPTERA CHALCIDOIDEA—VI.

## SUPPLEMENT.<sup>1</sup>

By A. A. GIRAULT.

MAGNIFICATION as previously.

### FAMILY PTEROMALIDÆ.

#### TRIBE PTEROMALINI.

#### GENUS PTEROMALUS Swederus.

#### 1. PTEROMALUS AUSTRALICUS new species of Girault and A. P. Dodd.

*Female*:—Length, 3 mm.

Dark metallic blue; second abdominal segment dorsad, brilliant metallic blue; segments 3-5 dorsad, purple; coxæ metallic; femora dark brownish; trochanters, knees and tibiæ, golden yellow; tarsi paler yellow; antennal scape golden yellow; rest of antennæ fuscous. Thorax densely punctate; parapsidal furrows almost, or quite, complete; *scutellum with a distinct cross-suture*. Propodeum rather long, with a neck; distinctly tricarinate; spiracles large, oval. Abdomen wider but no longer than the thorax; ovate; second segment occupying fully one third of the surface; third two thirds length of second; fourth one half length of third; 4-6 subequal; seventh longer than sixth. Wings hyaline; venation yellow; marginal and postmarginal veins subequal; stigmal vein somewhat shorter. Antennæ 13-jointed, two ring, three club joints; first funicle joint distinctly longer than the pedicel, one half longer than wide; 2-6 gradually shortening, but the sixth is distinctly longer than wide; club as long as two preceding joints united; first club joint a little the longest of club.

*Male*:—Not known.

Described from one female caught on foliage of *Eucalyptus platyphylla*, December 8, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2762, Queensland Museum, Brisbane, the specimen on a tag, plus a slide bearing the head and a hind leg.

#### GENUS APLASTOMORPHA Crawford.

#### 1. APLASTOMORPHA AUSTRALIENSIS (Girault).

*Ncocotolaccus australiensis* Girault.

Three females from windows, Innisfail, Queensland, January 11, 1912 (A.A.G.). Another female at Cairns, Queensland, sweeping the foliage of tea trees, November 1, 1911 and one female from a window, Hambledon Junction (Cairns), November 2, 1911. The general colour is very dark. The abbreviated parapsidal furrows are faint. The postmarginal vein is nearly as long as the marginal; segment 3 of abdomen as long as 2, 4 a little longer than

<sup>1</sup> See these Memoirs, II, pp. 303-334.

either, longest, 2 and 3 together occupying half of the surface. Femora concolorous. The general coloration may be brighter in individuals. Common on windows at Gordonvale. On May 11, 1914, at this latter place, this species was abundant in a box of seed corn infested with a common grain weevil (*Calandra*) and obtained from a local grocer. Formerly, I had seen it abundant in other lots of this corn received from the same grocer and infested with the same weevil (most probably *granaria* but not critically examined). The spiracular sulci are present. Pubescence not especially noticeable. The lateral carina is short, nearly wholly transverse and originates at the lateral side of the fovea at cephalic margin of propodeum. A rather common species. Types re-examined.

## 2. APLASTOMORPHA SAGA new species.

*Female*:—Length, 2.75 mm.

Rather bright metallic green, the coxæ concolorous, the legs white, but the last two pairs of femora brownish black. Scape reddish brown. Differs from *australiensis* in having the lateral carinæ complete, not curving to form a cross-carina. Antennæ black, the pedicel not quite as long as the distal funicle joint which is somewhat wider than long, the joint preceding it quadrate; third club joint much the shortest. Clypeus longitudinally striate. Marginal, postmarginal, and stigmal veins are a little longer than with *australiensis* but of the same relative lengths. Parapsidal furrows incomplete. Much brighter than *australiensis*. Segments 2, 7 and 5 of abdomen longest, 3 and 4 short, none long.

*Male*:—Unknown.

Described from one female from a gall on Eucalyptus, forest, November 1, 1913. The specimen of *australiensis* formerly recorded from miscellaneous galls was this species.

*Habitat*: Gordonvale (Cairns), Queensland. Gall on Eucalyptus.

*Type*: No. Hy 2763, Queensland Museum, Brisbane, the above female on a tag, the head and caudal legs on a slide.

“This species is at once distinguished from *pulchra* Girault and Dodd by having a long slender abdomen, the latter much longer than the thorax.” (A. P. Dodd.)

## 3. APLASTOMORPHA PULCHRA new species of Girault and A. P. Dodd.

*Female*:—Length, 2.25 mm.

Agreeing with the generic description, except that the lateral carinæ on the propodeum are present and distinct.

Brilliant metallic blue-green, the coxæ concolorous; abdomen suffused with brown; eyes garnet; rest of legs and antennal scape golden yellow; pedicel and ring-joints dusky yellow; flagellum black. Wings hyaline, the venation golden yellow. Thorax densely punctate; parapsidal furrows two thirds complete. Abdomen no longer than the thorax; second segment occupying almost one third of the surface; third not one half as long; 4-6 subequal, each longer than third. First funicle joint distinctly longer than the pedicel, distinctly longer than wide; 2.5 wider than long; club not much longer than wide; ring-joints rather small.

*Male*:—Not known.

Described from one female caught by sweeping grass and foliage, forest, January 29, 1913 (A. A. Girault).

*Habitat*: Townsville, Queensland.

*Type*: No. Hy 2764, Queensland Museum, Brisbane, the specimen on a tag, the head and a hind leg on a slide.

**4. APLASTOMORPHA FLAVOBASALIS** new species of Girault and A. P. Dodd.<sup>2</sup>

*Female*:—Length, 1.90 mm.

Agreeing with the description of *pulchra* (Girault and Dodd but the femora are concolorous with the thorax, the rest of the legs white; (scape not seen); pedicel and ring-joints concolorous with the rest of the flagellum. Abdomen brown, very lightly washed with metallic, the proximal fifth yellow, the incisions of the segments showing as fine yellow cross-stripes. The abdomen is rather longer and more slender than with *pulchra*; its second segment occupies a fourth of the surface and the caudal margin of segments 2 and 3 at meson is slightly incised. Joints 2-5 of funicle not wider than long, 5 quadrate; club over twice longer than wide.

*Male*:—Not known.

Described from one female captured by sweeping in a jungle pocket, January, 17, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2765, Queensland Museum, Brisbane, the above specimen on a tag, the head and a caudal leg on a slide.

**5. APLASTOMORPHA RETICULATA** new species of A. P. Dodd.

*Female*:—Length, 2.60 mm.

Dark metallic blue, the coxæ and femora concolorous, the base of the abdomen brilliant blue-green, the tibiae and tarsi white; antennal scape yellow; pedicel brown, rest of antennæ black. Thorax polygonally reticulate, the reticulation in raised lines, the propodeum more finely so. Propodeum with a median and lateral carinæ, also a complete cross-carina; spiracular sulci obscure. Abdomen pointed conic-ovate, scarcely longer than rest of body, second segment occupying nearly one fourth of surface, its caudal margin convex, the third one fourth its length, the others lengthening, the seventh quite as long as the second and nearly as long as the two preceding segments united. Wings hyaline, postmarginal vein twice as long as the stigmal and a little longer than the marginal. Pedicel subequal to funicle 3, funicle 1 longest, 5 almost quadrate, first club joint as long as the preceding joint and as long as the other two club joints combined.

*Male*:—Not known.

Described from one female caught in jungle, February 5, 1914 (A. P. Dodd).

*Habitat*: Babinda, Queensland.

*Type*: No. Hy 2766, Queensland Museum, Brisbane, the female on a tag; head and hind legs on a slide.

**6. APLASTOMORPHA 5-FASCIATA** new species.

*Female*:—Length, 1.60 mm.

Brassy green, the wings hyaline, the coxæ concolorous, the scape and legs dull golden yellow, the caudal femora subfuscous, darker. Abdomen dull golden yellow and with five cross-stripes counting the fifth at tip, the first a short distance out from base. Antennæ dark brown. Abdomen subpetiolate. Propodeum with a thin, obscure median carina, more like a ruga and more obscure near apex (distad), the lateral carinæ complete, distinct, abruptly changing direction from caudo-laterad to caudo-mesad, opposite (mesad of) the spiracle; spiracular sulcus present, not very distinct. Thorax including propodeum, finely punctate. Postmarginal vein barely shorter than the marginal, a little longer than the stigmal. Funicles 4 and 5 each a little longer than wide (in *pulchra*, a little wider than long). Pedicel wholly dark brown not mostly yellow as in *pulchra*. Funnicle 1 longest, longer than the pedicel, somewhat longer than wide.

From one female caught October 11 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 2767, Queensland Museum, Brisbane, the specimen on a tag; head and hind legs on a slide.

<sup>2</sup> Compare *Eurydinotoloides flavibasalis*.

## TRIBE RAPHITELINI.

## GENUS NASONIA Girault and Sanders.

1. **NASONIA BREVICORNIS** Girault and Sanders.

The footnote on page 307 of Part VI (these Memoirs, Vol. II, p. 307) refers to this species and not to *Muscidifurax raptor* Girault and Sanders which I have not seen from Australia.

I took a specimen of *brevicornis* from a window of a wool-house at Brisbane, Queensland, October 3, 1911 and Mr. Edmund Jarvis, Assistant Government Entomologist, sent me six females reared from dipterous pupæ at Longreach and Aramac, Queensland, in October, 1913. The host was the sheep fly maggot. The antennæ of *brevicornis* are inserted slightly above the ventral ends of the eyes. The spiracular sulcus is distinct, just laterad of the lateral carina. A common species.

## TRIBE ROPTRO CERINI.

## GENUS PARURIELLA Girault.

This genus is identical in form, or nearly, to the species referred to *Systasis*.

1. **PARURIELLA HORRIDULA** new species.

*Female*:—Length, 1.32 mm.

Like *Systasis sepositus* Girault but the antennæ differ in that the funicle joints gradually enlarge, joint 1 or 2 smallest, a little wider than long, the others gradually widening. Form identical with the species referred to. Propodeum with a median carina only.

*Male*:—Unknown.

Described from one female captured by sweeping miscellaneous vegetation, October 5, 1911.

*Habitat*: Roma, Queensland.

*Type*: No. Hy 2768, Queensland Museum, Brisbane, the specimen on a tag, the head and hind legs on a slide.

“ Similar to *persimilis* but rather stouter, the propodeum still shorter, the lateral carinæ absent, the funicle more clavate, the first funicle joint smaller ” (A. P. Dodd).

2. **PARURIELLA PERSIMILIS** new species of A. P. Dodd and A. A. Girault.

*Female*:—Length, 1.60 mm.

Very similar to *australiensis* Girault but not so slender, the propodeum distinctly shorter the venation pale yellow, the first two pairs of tibiae white like the tarsi, the caudal tibiae brownish.

*Male*:—Not known.

Described from a female captured by sweeping edge of jungle, December 20, 1912 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 2769, Queensland Museum, Brisbane, the female on a tag, the head and hind legs on a slide.

“ In *australiensis*, the lateral carina is weaker cephalad and originates at the caudal apex of the spiracle ” (A.A.G.).



## GENUS ROPTROCEROPSEUS Girault.

**1. ROPTROCEROPSEUS ALBIPES** new species of A. P. Dodd and Girault.

*Female*:—Length, 2.30 mm.

Very dark metallic blue, the abdomen dull greenish, the cephalic coxæ and basal half of middle coxæ concolorous, rest of legs and antennal scape yellowish white, pedicel and funicle joints yellowish brown, the club lemon yellow. Thorax with fine, polygonal scaly sculpture, not raised, the propodeum rugulose towards the centre, practically smooth for the rest. Abdomen pyriform, depressed above, second segment occupying a third of the surface. Cross-suture of scutellum foveate. Marginal and postmarginal veins subequal, the latter twice as long as the stigmal. Pedicel a little longer than any of the funicle joints, of which the first is somewhat longer than wide, the fifth wider than long; club joints wider than long. Wings hyaline. Mandibles 4-dentate. Lateral carinæ of propodeum weaker than the median.

*Male*:—Not known.

Described from one female captured in jungle, February 5, 1914 (A. P. Dodd).

*Habitat*: Babinda, Queensland.

*Type*: No. Hy 2770, Queensland Museum, Brisbane, the above specimen on a tag, the head on a slide.

**2. ROPTROCEROPSEUS SIMILIFORMIS** new species of Girault and A. P. Dodd.

*Female*:—Length, 1.38 mm.

Almost exactly similar to *albicornis* Girault except that the mandibles are 3 and 4-dentate and the first funicle joint is a little wider than long, a little shorter than the pedicel (in the genotype distinctly longer than wide, the pedicel also longer than wide). Hind coxæ compressed in both species, the propodeal spiracle minute, round. In the genotype, the stigmal vein is somewhat over half the length of the marginal; in this species the latter seems somewhat longer in relation to the stigmal vein. Compared with type of *albicornis*.

Described from one female caught by sweeping in forest, February 6, 1913 (A. P. Dodd).

*Habitat*: Northern Queensland (Gordonvale near Cairns).

*Type*: No. Hy 2771, Queensland Museum, Brisbane, the above specimen on a tag, the head on a slide.

**3. ROPTROCEROPSEUS ALBICORNIS** Girault.

Two females, January, 1913 at Gordonvale (Cairns), Queensland, reared from galls on *McLalluca* (A. P. Dodd). Rather common.

## GENUS URIELLOIDES Girault.

This genus resembles somewhat *Aplastomorpha* Crawford rather than *Neocatolaccus* Ashmead.

PSEUDANOGMUS new genus of A. P. Dodd and A. A. Girault.

*Type*: The following species.

**1. PSEUDANOGMUS FASCIIPENNIS** new species of A. P. Dodd. Genotype.

*Female*:—Length, 2 mm. Rather stout and robust.

Very dark metallic green, the coxæ concolorous, the abdomen burnished coppery, rest of legs golden yellow; antennal scape pale yellow, rest of antennæ blackish. Both mandibles 4-dentate. Antennæ inserted against the mouth, 13-jointed, with three ring- and three club

joints. Scape very long and slender, two thirds as long as the face; pedicel slender, much longer than any of the funicle joints which are subequal, each somewhat longer than wide; first two club joints about subequal, as long as wide; ring-joints moderately large. Thorax with very fine, dense longitudinal reticulation, the propodeum practically smooth. Parapsidal furrows incomplete. Scutellum with a faint cross-suture. Propodeum tricarinate, the carinae very distinct; spiracle small, rounded, situated further caudad than usual, no spiracular sulci. Abdomen no longer or wider than the thorax, straight beneath, slightly convex above; second segment occupying about a fourth of the surface, the others more or less subequal; caudal margins of all segments straight. Fore wings with a sooty blotch just beneath the curve of the submarginal vein and another beneath apex of stigmal vein; marginal vein twice as long as the stigmal, the latter as long as the postmarginal, the venation distinct.

*Mate*:—Not known.

Described from one female captured by sweeping foliage and grass along the Mulgrave River, mostly jungle, March 30, 1913 (A.A.G.).

*Habitat*: Mulgrave River, Cairns District, Queensland.

*Type*: No. Hy 2772, Queensland Museum, Brisbane, the female on a tag, the head and hind legs on a slide.

This genus differs from *Uriclloides* Girault in having the antennae inserted against the mouth and both mandibles 4-dentate.

## 2. PSEUDANOGMUS FUSCIPES new species.

*Female*:—Length, 1.60 mm.

Very similar to the genotype, being nearly black but the femora are concolorous, the tibiae much lighter (brown) and the funicle joints are somewhat wider than long. Mandibles not distinctly seen but one 4-dentate. Flagellum black. Both species are densely, finely scaly punctate, the propodeum scaly.

From one female caught October 11 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 2773, Queensland Museum, Brisbane, the specimen on a tag; head, caudal tibiae and wings on a slide.

"In this genus the abdomen is flat, rounded ovate, wider than the thorax; the head is longer than wide, the antennal club with an apparent fourth joint which is distinct but does not appear to be articulated; the scutellum has not a transverse suture before apex." (A. A. Girault.)

## PARANOGMUS new genus of Girault and A. P. Dodd.

*Female*:—Head no wider than the thorax, not much wider than long (cephalic aspect); eyes moderately large. Antennae inserted below the middle of the face, on a line with the ventral ends of the eyes; 11-jointed, with three ring-joints and a solid club. Mandibles 4-dentate. Pronotum short; parapsidal furrows half complete; scutellum simple. Propodeum short, broad, without a neck, glabrous, tricarinate, the carinae well defined and also with a few irregular longitudinal carinae; spiracles round, no spiracular sulci. Abdomen conic-ovate, scarcely longer than the thorax; second segment the longest, occupying one fourth of the surface, third not one half as long; fourth longer than third; fifth longer than fourth, two thirds as long as second; sixth and seventh each about as long as fourth. Marginal vein twice as long as the stigmal, which is moderately long; postmarginal vein slightly longer than the stigmal.

**1. PARANOGMUS PALLIDICORNIS** new species of Girault and A. P. Dodd. Genotype.

*Female*:—Length, 1.75 mm.

Brilliant metallic coppery green, the coxæ concolorous; rest of legs (except apical joint of tarsi which is dusky) and the antennæ, very pale straw yellow. Wings hyaline, the venation almost white. Thorax, except the smooth propodeum, finely reticulate, the reticulation in raised lines. Pedicel distinctly longer than any of the funicle joints, which are subquadrate, a little wider than long; flagellum gently clavate; club twice as long as wide.

Described from two females caught by sweeping in forest, mainland, near Double Island, December 24, 1911 (A.A.G.).

*Habitat*: Double Island (Cairns), mainland, Queensland.

*Type*: No. Hy 2774, Queensland Museum, Brisbane, the specimen on a tag, the head and hind legs on a slide.

**URIELLOMYIA** new genus.

*Female*:—Like *Uriella* Ashmead but the abdomen with the third segment next longest, the second longest, occupying nearly a fourth of the surface and distinctly longer than the third. Mandibles 3- and 4-dentate. Propodeum tricarinate and with a long cross-carina which crosses the median and lateral carinæ and passes in front of the rather small, oval spiracle. Parapsidal furrows rather short, nearly complete. Postmarginal and stigmal veins subequal, moderate in length as is also the marginal which is about one and two third times the length of the stigmal. Antennæ 13-jointed with two ring-joints. Scutellum simple. Pronotum transverse. The axillæ are not advanced.

*Male*:—Not known.

*Type*: The following species.

**1. URIELLOMYIA RESOLUTA** new species. Genotype.

*Female*:—Length, 1.85 mm. Robust.

Very dark aneous green, the wings hyaline, the venation, legs, scape and pedicel yellow brown; pedicel dark above. Coxæ dark metallic. Thorax densely, finely reticulately scaly. Pedicel somewhat longer than any of the funicle joints of which the first is a little longer than wide and narrower than the others, 2 and 3 a little longer than 1, the remaining three quadrate. Scape slender. Club without a nipple.

Described from four female specimens captured from the windows of a grocery store, October, 30, 1911.

*Habitat*: Port Douglas, Queensland.

*Type*: No. Hy 2775, Queensland Museum, Brisbane, the above females on tags (two pins) and a slide with two heads and hind legs.

One female on a window, Thursday Island, Torres Strait, March 14, 1912.

**2. URIELLOMYIA FLAVICORNIS** new species of Girault and A. P. Dodd.

*Female*:—Length, 2.60 mm.

Differs from the generic description in bearing 4-dentate mandibles and in propodeal characters; propodeum with a pair of very short, abbreviated median carinæ at base and complete lateral carinæ which branch, one branch running obliquely to the caudal margin mesad, the other to the caudal margin laterad; no cross-carina.

Very dark metallic green, the coxæ concolorous; abdomen shining metallic coppery; antennæ golden yellow; femora and basal half of tibiæ yellowish brown; apical half of tibiæ

and the tarsi (except dusky apical joint) white. Wings hyaline; marginal vein one third longer than the stigmal and one fourth longer than the postmarginal. Thorax, including propodeum, punctate; parapsidal furrows half complete. Abdomen conic-ovate, a little longer than the head and thorax united; second segment occupying one fourth of the surface, distinctly longer than the third; 3-7 about subequal. Antennæ inserted about middle of face; 13-jointed, with two ring, three club joints; pedicel slender, a little longer than first funicle joint; ring-joints usual; flagellum gently clavate; first and second funicle joints distinctly longer than wide, the sixth subquadrate, a little wider than long; club twice as long as wide, the first joint the longest.

Described from one female caught by sweeping in forest, July 1, 1913 (A. P. Dodd).

*Habitat*: Northern Queensland (Gordonvale near Cairns).

*Type*: No. Hy 2776, Queensland Museum, Brisbane, a female on a tag, the head and a hind leg on a slide.

### 3. *URIELLOMYIA HACKERI* new species of A. P. Dodd.

*Female*:—Length, 2.60 mm.

Metallic green; antennal scape and pedicel, coxæ and femora concolorous, the tibiæ slightly washed with metallic, the tarsi and most of tibiæ yellow; antennal funicle fuscous, the club yellowish. Thorax reticulately punctate; parapsidal furrows incomplete; scutellum simple. Propodeum short, glabrous, with a median and lateral carinæ, the median carina dividing caudad; also mesad of the lateral carina there is another distinct longitudinal carina. Abdomen conic-ovate, depressed above, convex beneath, a little longer than the head and thorax united, segments 2, 5, 6 and 7 about subequal, longest, the third the shortest; base of abdomen smooth and shining, the rest more or less finely scaly. Fore wings hyaline, the marginal vein somewhat longer than the postmarginal, the latter somewhat longer than the stigmal. Mandibles 4-dentate, the teeth not acute. Flagellum gently clavate; pedicel longer than any of the funicle joints of which the second is longest, a little longer than wide, the others wider than long; antennæ inserted about middle of face.

*Male*:—Not known.

Described from one female labelled "Brisbane, H. Hacker, 10-8-13."

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 2777, Queensland Museum, Brisbane, the specimen on a tag, the head and hind leg on a slide.

### *URIELLOPTEROMALUS* new genus.

*Type*: The following species.

#### 1. *URIELLOPTEROMALUS SUBPLANITHORAX* new species.

*Female*:—Length, 1.65 mm.

Differs from *Uriella* Ashmead in bearing axillæ which are much advanced, being cephalad of the scutellum; the mandibles are tridentate, the abdomen is no longer than the thorax though conic-ovate, the second segment somewhat the longest, occupying about a fifth of the surface, a third longer than segment 3; the thorax is rather flattened and the postmarginal and stigmal veins are rather short, the former a little the longer, the stigmal just about a third the length of the marginal, not sessile; marginal vein a fifth shorter than the submarginal. Parapsidal furrows delicate, a third complete from cephalad.

Dark æneous green with purplish tinges, the wings hyaline, the legs reddish brown except the concolorous coxæ. Antennæ honey yellow, the funicle joints wider than long but the proximal ones a little longer than the distal ones; scape short, the pedicel barely longer than wide; inner tooth of mandible truncate. Propodeum with a delicate median carina and no others. Head and thorax finely, delicately polygonally scaly. Third club joint not as distinctly separated as are the others. Lateral margins of scutellum subcarinate. Pronotum (dorsal aspect) transverse. Propodeal spiracle separated from caudal part of propodeum by a transverse, obtuse elevation of the surface (not a carina).

*Male*:—Not known.

Described from one female captured either by sweeping in the jungle or else from a window in a jungle settlement, December 30, 1911.

*Habitat*: Yungaburra, Queensland.

*Type*: No. *Hy* 3465, Queensland Museum, Brisbane, the above specimen on a tag, the head and a hind tibia on a slide.

In *Uriellomyia* the axillæ are not advanced (the genotype examined).

#### NEROPTROCERUS new genus.

*Female*:—Agreeing with the description of *Roptrocerus* Ashmead but the club solid, the antennæ thus but 10-jointed. The postmarginal and marginal veins are longer but neither long.

*Male*:—Unknown.

*Type*: The following species.

##### 1. NEROPTROCERUS SUBATER new species.

*Female*:—Length, 1.80 mm. Stout, rather short.

Black metallic green, the wings hyaline, the coxæ concolorous, the legs yellowish brown, the cephalic femur concolorous. Scape concolorous with the legs, the pedicel dusky-brown, rest of antenna black. Funicle 1 longest, subequal to pedicel, somewhat longer than wide and widest distad; funicle 2 somewhat wider than long, 3 and following still wider. Funicle joints subpetiolate. Club longer than the two preceding joints united. Head and thorax uniformly densely shagreened (minute papillæ crowded together). Cross-suture of scutellum and parapsidal furrows well-defined, the latter complete. Propodeum subglabrous, the spiracle rather large, round, cephalad. Median carina of propodeum narrow, not straight. Axillæ not advanced. Segment 2 of abdomen occupying a third of the surface, caudal margins of all segments straight, 2 glabrous, the others scaly cephalad; segment 3 shortest, transverse.

Described from one female captured in jungle, February, 11, 1914 (A. P. Dodd).

*Habitat*: Babinda, Queensland.

*Type*: No. *Hy* 2778, Queensland Museum, Brisbane, the specimen on a tag; head, fore and hind legs on a slide with type appendages of *Hetreulophus bifasciatifrons* Girault.

#### TRIBE MERISINI.

##### GENUS AMICROMELUS Girault.

This genus belongs to the Metastenini of the Miscogasteridæ instead of the Trydymini as formerly stated by mistake.



## TRIBE BRACHYSCOLIDIPHAGINI.

## GENUS CŒLOCYBA Ashmead.

## 1. CŒLOCYBA VIRIDILINEATA Froggatt.

This species is doubtless a *Gyrolasella* of the elachertine Eulophidæ which see.

## 2. CŒLOCYBA VARIFASCIATA new species.

*Female*:—Length, 1.25 mm.

Golden yellow, the thorax orange yellow, the wings hyaline. Parapsidal furrows, cephalic and caudal margins of propodeum, tip of ovipositor valves, thorax just caudo-laterad of each axilla around their margins and the following abdominal markings black: A crescent across meson before tip and four transverse stripes between this and base, all four interrupted about half way to lateral margin on each side so that they are composed of two transverse marginal spots and a transverse spot across the meson. Mandibles tridentate. Distal tarsal joint and club dusky black, the club solid, the antennæ 11-jointed; first two funicle joints subequal, like ring-joints, the third larger but still like a ring-joint. Venation yellow; post-marginal and stigmal veins subequal, each a little longer than the marginal. Fore wings with a broad hairless line from base of marginal vein, closed caudad. Caudal wings finely densely ciliate, with about eleven lines of cilia where broadest. Vertex, pro- and mesonotum with numerous but not dense black hairs. Legs as in *acineta*. Propodeum transverse.

From one female caught at 1,000 feet in forest, May 17, 1914 (A. P. Dodd).

*Habitat*: Upper Tweed River, New South Wales.

*Type*: No. Hy 2779, Queensland Museum, Brisbane, the specimen on a slide.

## GENUS ISOPLATA Girault.

“The antennæ in this genus are only 12-jointed, two ring, three club joints, the ring-joints small. The antennæ are inserted well below the middle of the face.” (A. P. Dodd.)

Types of *geniculata* re-examined (A. P. Dodd and A.A.G.).

## 1. ISOPLATA FLORIOLA new species of A. P. Dodd and Girault.

*Female*:—Length, 1.50 mm.

Similar to *geniculata* Girault but all coxæ metallic, funicle 1 not narrower than the others, the funicle joints all wider than long, the pedicel is shorter than in the genotype yet longer than any of the funicle joints, the club stouter, its joints much wider than long (longer than wide in *geniculata*).

*Male*:—Unknown.

Described from three females in the collection of the Queensland Museum, labelled “From flowers of *Bækea*, April 22, 1913, H. Hacker.”

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 2780, Queensland Museum, Brisbane, the above specimens on a tag, two heads on a slide.

## SUBFAMILY EUNOTINÆ.

## GENUS EURYCRANIUM Ashmead.

## 1. EURYCRANIUM BÆUSOMORPHA new species.

*Female*:—Length, 0.85 mm. Short and robust, resembling the *Bæinæ* and the genus *Hadronotus* Foerster in form.

Apparently differing from the genotype in bearing a cross-suture near apex of scutellum and perhaps in other characters as below.

Dark metallic green, the wings hyaline; the wide, thin, triangular head, the short, flattened, rounded (dorsal aspect) abdomen and the legs (paler) deep golden, or orange, yellow, the antennæ pale yellow. Lateral ocelli far distant from the eye margins. Antennæ inserted at the mouth, 8-jointed, the club enlarged, solid; the scape slender, long; the pedicel of usual length, much longer than any of the funicle joints all of which are wider than long, 5 largest, each enlarging in succession, 5 twice the length of 1 and much wider. Proximal joint of hind tarsus abruptly longer than the others, the tibial spur normal. Mandibles slender, tridentate, the teeth slender. Thorax finely reticulate scaly; the convex cross-suture of scutellum delicate; propodeum subconical, coarsely foveate. Second segment of abdomen occupying somewhat over a third of the surface; second and third combined, occupying nearly two thirds. Pronotum large, transverse-quadrate, the scutum shorter than the scutellum; parapsidal furrows complete. Postmarginal vein slightly longer than the stigmal, both slender but of moderate length, the marginal distinctly longer than either. Thorax very sparsely pubescent. No ring-joint.

Described from one female caught in forest, December 20, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2781, Queensland Museum, Brisbane, the specimen on a tag, the head and hind tibiae on a slide.

#### PAREUNOTUS new genus.

*Female*:—In Ashmead's table running to *Anysis* Howard, the antennæ being 10-jointed, strongly clavate, the club solid; antennæ inserted below the middle of the face. Mandibles tridentate. Hind tibial spur normal, rather stout. Face inflexed. Postmarginal and stigmal veins long and slender, the former a little the longer, the marginal a little shorter than the stigmal, about three times longer than wide or somewhat more. Hind coxæ large. Axillæ widely separated. Parapsidal furrows deep. Propodeum transverse, the postscutellum overhanging it. A broad oblique hairless line from apex of submarginal vein. Hind femur compressed. Scutellum with a faint cross-suture indicated before apex. Scutellum distinctly shorter than the scutum; the postscutellum triangular, tolerably large.

*Male*:—Not known.

*Type*: The following species.

##### 1. PAREUNOTUS FLAVICORPUS new species.

*Female*:—Length, about 0.98 mm.

Pale honey yellow and finely scaly. A stripe across cephalic margin of propodeum, the indicated cross-suture of scutellum and cephalo-lateral ends of the axillæ dark purplish black. Wings hyaline. First three funicle joints like ring-joints but each enlarging, 3 not a third the length of 4 which with 5 and 6 are distinctly wider than long and subequal, subtransverse; funicle 7 is longer than 6, still much wider than long. Club short.

Described from one female captured in forest, December 26, 1912.

*Habitat*: Capeville (Pentland), Queensland.

*Type*: No. Hy 2782, Queensland Museum, Brisbane, the specimen on a slide.

What I thought was the abdomen of this specimen, which had become separated, bore six distinct purplish black cross-stripes, the first at base and all intersected by a median longitudinal stripe. Valves of ovipositor are black. Abdomen conic-ovate, none of the segments greatly lengthened.

#### MUSCIDEA new genus.

*Female*:—In Ashmead's table runs to this genus which was formerly without status, the genotype being undescribed. I adopt the name for the following species. Head wider than long, the antennæ 9-jointed with one very short ring-joint, the club solid and as long as the funicle and much wider. Mandibles small, acute. Hind tibial spur normal for the family.

Postmarginal vein absent, the stigmal long but somewhat shorter than the marginal. Scutellum simple. Second segment of abdomen occupying only a third of the surface, together with the third segment which is shorter, occupying one half. Fourth segment transverse linear. Propodeum at apex contracted into a short neck which appears like a petiole but is not considered so. Pronotum about half the length of the scutum. Postscutellum short, crescentic, foveate, the scutellum at apex very broadly or flatly convex. Propodeum with a short median carina between its neck and the apex of postscutellum on either side of which are foveæ arranged transversely. Abdomen depressed, ovate, as long as the thorax. Hind femur swollen. Parapsidal furrows distinct. Occiput concave. Frons broad. Propodeal spiracle minute, round. Head lenticular.

*Male*:—Not known.

*Type*: The following species.

### 1. *MUSCIDEA BRUNNEIVENTRIS* new species.

*Female*:—Length, 1.30 mm.

Black with a purplish tinge, the wings hyaline, the abdomen, legs and antennæ yellowish brown, the head and thorax reticulated, shining, the propodeum foveate. Distal third of abdomen above sordid. Lateral wing of propodeum (at the spiracle and for some distance around) glabrous. Funicle 5 longest and widest, distinctly wider than long as are the others, 1 smallest, 2 longer, 3 and 4 subequal, still longer but distinctly smaller than 5 which is much shorter than the normal pedicel.

Described from one female captured in forest, August 7, 1913.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. *Hy* 2783, Queensland Museum, Brisbane, the specimen on a tag; head, a fore wing, middle and hind tibia on a slide.

### *MUSCIDEOPSIS* new genus.

*Female*:—Like *Muscidea* but the mandibles tridentate, the postmarginal and stigmal veins well developed, not very long but distinct, the postmarginal vein somewhat longer than the stigmal and two thirds the length of the marginal. Scutellum with a punctate cross-furrow. The second abdominal segment occupies about one half of the surface. Otherwise about the same but the pronotum is not more than a fourth the length of the scutum. Habitus of a bæine proctotypoid. Abdominal segments following 2 transverse linear.

### 1. *MUSCIDEOPSIS GOLDSMITHII* new species. Genotype.

*Female*:—Length, 1 mm.

Dark metallic blue, the abdomen, legs and antennæ honey yellow, the wings hyaline, the venation pale yellow. Body polished; frons with scattered minute setigerous punctures. Cephalic coxæ bluish. Parapsidal furrows punctate. Scutellum about as long as the scutum. Thorax with a few long setæ from minute punctures. Neck of propodeum appearing from above like a short, stout abdominal petiole. Ring-joint minute; pedicel distinctly longer than any of the funicle joints of which 5 is largest, thrice the size of 1 and distinctly wider than long; all funicle joints wider than long, widening distad; club three fourths the length of the funicle. Scape slender. Propodeum with strong, irregular carinæ.

*Male*:—Not known.

Described from one female taken by sweeping along a jungle-clad forest streamlet, March 25, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. *Hy* 2784, Queensland Museum, Brisbane, the specimen on a tag, the head and two hind tibiæ on a slide.

Dedicated to Oliver Goldsmith.







## MUSCIDEOMYIA new genus.

*Female*.—Agrees with the description of *Amuscidea* Girault but the postmarginal vein is somewhat longer than the stigmal, the scutellum is without a cross-suture, the abdomen is conic-ovate, longer than the thorax and the mandibles are 3- and 4-dentate, long and slender. Otherwise the same except as noted below.

## 1. MUSCIDEOMYIA NIGRICYANEA new species. Genotype.

*Female*.—Length, 0.80 mm. Small, graceful, the abdomen pointed.

Very dark metallic blue-black, the abdomen dark metallic green, the wings hyaline; middle and caudal tibiae very pale orange yellowish, the tips of tibiae and the tarsi white. Scape white, the pedicel black, rest of antennae brown. Thorax reticulate scaly, the propodeum smooth, very short, the spiracle minute, round, the propodeum shorter at the meson, noncarinate. Abdominal segments not lengthened, the abdomen normal. Stigmal vein with a rather large knob. Pedicel stout, longer than any of the funicle joints which widen distad, 5 largest. Ring-joint small. Club large, its joints distinct, wider than the funicle but not as long. Funicle 2 shortest, transverse, 1 globular. Flagellum armed with stiff setae.

*Male*.—Not known.

Described from one female taken in jungle along the Herbert River, April 6, 1914 (A. P. Dodd).

*Habitat*: Halifax, Queensland.

*Type*: No. Hy 2785, Queensland Museum, Brisbane, the specimen on a tag; head and hind tibiae on a slide with type appendages of *Neomphaloidella brevis* Girault.

## GENUS ANYSIS Howard.

“Antennae as with *Aphobetus*, except that funicle joint 2 is twice as long as 1; 3, 4 and 5 subequal in length, increasing in width, and each slightly shorter than 2. Eyes naked; head very broad; occiput strongly concave, its superior margin acute. Thorax well arched; parapsidal sutures meeting axillar sutures; scutellum broad at base, somewhat lengthened, extending over metanotum to vertical plane of base of abdomen, not cross-furrowed. Petiole distinct but very short; abdomen without basal tufts; second segment scarcely half the length of the abdomen. Marginal vein of fore wings three times longer than stigmal, postmarginal about as long as stigmal or slightly shorter; basal nervure not distinct. Basal nervure of hind wings extending at an acute angle toward base of wing. Spur of hind tibia short.”

## 1. ANYSIS AUSTRALIENSIS Howard. Female. Genotype.

“Length, 1.7 mm.; expanse, 3.8 mm.; greatest width of fore wings, .74 mm. General color blue-black, slightly metallic, glistening. Head and thorax with short, sparse, yellowish pile; face delicately shagreened and with fine sparse punctures; mesonotum similarly punctured; metanotum, pleura, and abdomen smooth; metanotum with a median longitudinal rounded carina. Antennae light brown, tip of club darker, pedicel and tip of scape above black; all femora nearly black in middle, lighter at each end; tibiae brown. Wing veins dark brown, fore wings infuscated, hind wings hyaline.”

*Habitat*: West Australia. Associated with Coccids.

*Types*: Most probably in the United States National Museum at Washington, D.C., U.S.A.

## SUBFAMILY SPHEGIGASTERINÆ.

## TRIBE ASAPHINI.

## GENUS ORMYROMORPHA Girault.

This genus belongs to the Asaphini; the abdomen bears a very short petiole.

**1. ORMYROMORPHA GLABRA** new species.

*Female*:—Length, 1.70 mm.

The same as the genotype but smaller, the abdomen is impunctate and almost glabrous (cephalic half of segments after 3 faintly scaly), the propodeum bears many two-thirds complete rugæ from cephalic margin and which anastomose, the distal margin of middle stripe of fore wing is also convexed. Propodeum with a distinct neck. Funicle joints increasing slightly in succession distad. Postmarginal vein slightly longer than the stigmal. Pubescence normal in all three species, or nearly so. Segment 2 of abdomen somewhat longer than 3, not especially long. Tuft of pubescence on propodeum laterad of the spiracle. Caudal coxæ imperial purple. Postmarginal and stigmal veins elongate, subequal to marginal. Antennæ inserted below the middle of the face, at the clypeus.

From one female caught October 11 (H. Hacker).

*Habitat*: Brisbane, Queensland.

*Type*: No. Hy 2786, Queensland Museum, Brisbane, the specimen on a tag; head and hind leg on a slide.

## ORMYROMORPHELLA new genus.

Differs from *Ormyromorpha* in that the scutellum bears a distinct cross-suture before apex. Postmarginal and stigmal veins subequal, elongate, a little shorter than the marginal. Abdominal petiole distinct but short. Antennæ inserted at the clypeus. Head convex, a little wider than long. Mandibles tridentate.

**1. ORMYROMORPHELLA BIARGENTINOTATA** new species.

*Female*:—Length, 3 mm.

Dark æneous green, the wings trifasciate, the antennæ brownish yellow, also first two pairs of knees, first two tibiæ at tips, first two pairs of tarsi, cephalic tibiæ except dorsad and intermediate three joints of caudal tarsi. First joint of middle tarsus and a transverse dash from each lateral margin, base of segment 3 of abdomen, silvery white. Thorax finely scaly reticulate, the scutellum distad of transverse suture and the postscutellum glabrous, the propodeum densely, rather minutely or finely rugulose. Head scaly like the scutum. Cephalic third of segments of abdomen after 3, scaly. Petiole wider than long, glabrous (dorsad); base of meson of segment 2 of abdomen with about five short sulci. Hind coxa scaly, the caudal femur rather stout. Third or apical stripe of fore wings no longer than the proximal, the large middle stripe from whole of postmarginal vein, its distal margin passing a little distad of apex of stigmal vein. Ring-joints increasing in length distad; funicle 1 longest, quadrate, a little over half the length of the pedicel.

From one female caught by sweeping forest uplands, May 30, 1914 (A. P. Dodd).

*Habitat*: Maclean (Clarence River), New South Wales.

*Type*: No. Hy 2787, Queensland Museum, Brisbane, the specimen on a tag; head, a fore wing and a hind tibia with slide type of *Ormyromorpha glabra*.





## HOLASAPHES new genus.

*Female*.—Head wider than the thorax, lenticular, the occiput concave; running to *Asaphes* Walker but the antennæ only 11-jointed; club indistinctly 3-jointed, the flagellum clavate, the first funicle joint like a ring-joint. Like *Asaphoideus* Girault but the hind tibial spurs rather long and stout (somewhat stouter than normal in the other genus) and the postmarginal vein is twice or more the length of the marginal which is plainly not twice the length of the stigmal and the ovipositor and valves are distinctly extruded for a third or less the length of the abdomen. The punctate line across scutellum is rather distant from the apex in both genera and it is the fourth abdominal segment which is much the longest in both genera; also in both, the pronotum is subequal to the short scutum. Petiole in this new genus rather shorter than with *Asaphoideus*. Type of latter re-examined (type of *niger*).

With the habitus of a Torymid and somewhat of a Eurytomid.

1. *HOLASAPHES GREGI* new species. Genotype.

*Female*.—Length, 1.67 mm., excluding the short ovipositor.

Black, rather shining, the wings hyaline, the legs reddish brown, paler at the articulations and tarsi, the coxæ black; antennæ concolorous with the legs; last funicle joint widest, the joints not much unequal in length, the pedicel much longer than any of the funicle joints. Mandibles strongly tridentate, the teeth subequal (in *Asaphoideus niger*, the lateral tooth is distinctly the longest, the mesal one smallest). Thorax finely, transversely polygonally scaly, the scutellum uniformly sculptured, the abdomen smooth; lateral carinæ rather close to median on propodeum, curved, joining the median a short distance before apex; a deep, curved spiracular sulcus runs directly from the small spiracle. (Spiracular sulcus also present in *Asaphoideus niger* but straighter). Segment 2 of abdomen longer than 3. Pronotum with a faintly indicated line of punctures across distad of middle.

Described from one female captured March 9, 1912 in forest.

*Habitat*: Horn Island, Torres Strait.

*Type*: No. Hy 2788, Queensland Museum, Brisbane, the specimen on a tag; head and hind tibiae on a slide.

2. *HOLASAPHES EMERSONI* new species.

*Female*.—Length, 1 mm., excluding ovipositor which is exerted for a length equal to a third that of the abdomen.

Very dark shining metallic blue-green, nearly black, the fore wing with a more or less obscure yellowish stain under the marginal and stigmal veins, and which does not extend further caudad than the middle; legs and antennæ pale straw yellow, the cephalic coxæ concolorous with the body. Caudal half of pronotum, the abdomen and the scutellum caudad of the transverse groove, glabrous. Otherwise as in the genotype, or nearly, but the club is distinctly 3-jointed, the head not as large and the antennæ slenderer.

*Male*.—Not known.

Described from one female captured in a jungle pocket, March 1, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2789, Queensland Museum, Brisbane, the specimen on a tag; head, hind legs and a fore wing on a slide.



## TRIBE SPHEGIGASTERINI.

The Australian genera of this tribe may need thorough revision. The genera are difficult to define.

## GENUS SYNTOMOPUS Walker.

## 1. SYNTOMOPUS AUSTRALIENSIS Girault.

The propodeum bears three distinct carinæ, a median and two lateral. The type is probably a female, stated to be a male in the original description. It has been re-examined. The type measures 1.75 mm., is on a slide and was captured at Kuranda, Q., December 18, 1912.

## GENUS MERISMUS Walker.

## 1. MERISMUS SQUAMOSUS new species.

*Female*: Length, 1.20 mm.

Dark purplish, the wings hyaline, the stigmal vein about half the length of the marginal, the postmarginal distinctly longer than the stigmal. Legs yellowish brown, also the scape. Thorax reticulate scaly, the scutellum distad of the transverse line glabrous. Propodeum long, with a short neck, strongly tricarinate. Second abdominal segment occupying somewhat over half of the surface, deeply semicircularly emarginate, the third segment not half its length. Mandibles 4-dentate. Petiole a little longer than the hind coxæ. Club long, with an apparent fourth joint near tip, the distal funicle joints quadrate, funicle 1 subequal to the pedicel, somewhat longer than wide. Antennæ 13-jointed with two ring-joints. Pronotum transverse, its cephalic margin subacute.

*Male*:—Not known.

Described from one female captured by sweeping in forest, April 7, 1913.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2790, Queensland Museum, Brisbane, the specimen on a tag, the head and hind legs on a slide.

## 2. MERISMUS SCUTELLARIS new species of A. P. Dodd and A. A. Girault.

*Female*:—Length, 1.75 mm.

Dark metallic green, the legs (including the coxæ) and antennal scape golden yellow, rest of antennæ black. Scutum and propodeum densely reticulated, the parapsides, axillæ and scutellum almost smooth, and shining. Scutellum with a very distinct cross-suture and also with a deep oval fovea or depression in its centre. Propodeum long, strongly tricarinate. Abdomen short, convex above, straight beneath, the petiole as long as the hind coxæ, the second segment occupying over half of the surface, its caudal margin straight. Wings hyaline; marginal vein scarcely longer than the postmarginal and twice as long as the stigmal. Mandibles 4-dentate. Pedicel somewhat longer than any of funicle joints which are subquadrate, a little longer than wide, club joints longer than wide.

Described from one female caught sweeping foliage and grass along the Mulgrave River, mostly jungle, March 30, 1913 (A.A.G.).

*Habitat*: Mulgrave River (Gordonvale), Queensland.

*Type*: No. Hy 2791, Queensland Museum, Brisbane, the specimen on a tag, the head and hind leg on a slide.





## GENUS POLYCYSTOIDES Girault.

## 1. POLYCYSTOIDES TENNYSONI Girault.

A female May 14, 1914 by sweeping in forest, Gordonvale. General color black. The fore wings are a little stained proximad. The suture across scutellum is really a ridge and has the appearance of being the apical margin. Type re-examined. The latter is a female on a tag, the head and hind legs on a slide. It measures 2.50 mm. and was taken April 13, 1913.

## GENUS HYOPTEROMALUS Ashmead.

## 1. HYOPTEROMALUS VIRIDESCENS (Walsh).

In the detailed description of this North American species given in the Bulletin of the Wisconsin (U.S.A.) Natural History Society, x (1912), on page 25, second line from bottom, *Cephalic aspect* should read *Dorsal aspect*.

## 2. HYOPTEROMALUS DUBIUS new species of Girault and A. P. Dodd.

*Female*:—Length, 1.25 mm.

Differing from the detailed generic description (*see* Bulletin of Wisconsin (U.S.A.) Natural History Society, vol. x, 1-2, June, 1912) in lacking the median carina of the propodeum and the obscure cross-suture on the scutellum; the first funicle joint is small, like a ring-joint and much smaller than the second; and the abdomen, viewed from lateral aspect, is not almost triangular, its ventral margin being but gently convex.

Very dark metallic green, almost black; the propodeum (except at meson) and the abdomen much brighter green, the latter suffused with brown; coxæ and femora brown; tibiæ, tarsi and antennal scape golden yellow; rest of antennæ fuscous. Wings hyaline, venation as in *Hyopteromalus viridescens* (Walsh). Mandibles 3 and 4-dentate, the teeth acute. Head somewhat wider than thorax; thorax rather short and broad, not much longer than wide; scutum fully twice as wide as long, the parapsidal furrows only indicated anteriorly; scutellum, viewed from lateral aspect, distinctly convex. Propodeum rather short and broad; lateral carinæ inconspicuous; spiracles not large, with rather delicate spiracular sulci. Thorax rather finely reticulated, the reticulation in raised lines. Abdomen somewhat shorter and narrower than thorax; petiole short; second segment occupying one third of the surface; remaining segments about subequal. Pedicel distinctly longer than any of the funicle joints; first funicle joint small; second distinctly larger; 2-6 subquadrate, wider than long; club barely twice as long as wide, the three club joints about subequal.

Described from one female caught by sweeping in forest, August 13, 1913 (A. A. Girault).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2792, Queensland Museum, Brisbane, the specimen on a tag, the head and a hind leg on a slide.

## SPHEGIPTEROSEMA new genus.

For diagnosis, see *antea* (these Memoirs, II), p. 323. The genotype is a new species. It measures 1.90 mm. and was taken in May, 1913. Its type is on a tag, the head and hind legs on a slide.

## 1. SPHEGIPTEROSEMA AUSTRALIENSIS new species of Girault and A. P. Dodd.

*Female*:—Length, 2.50 mm.

Head and thorax very dark metallic green, almost black, the coxæ concolorous; rest of legs bright golden yellow; abdomen metallic purplish, its petiole yellow; antennal scape and pedicel yellow, rest of antennæ black. Antennæ 13-jointed, with two ring and three club

joints; flagellum gently clavate; first funicle joint somewhat shorter than the second and only a little longer than wide; 4-6 wider than long; club longer than two preceding joints united; first two club joints subequal, third smaller. Wings hyaline; venation golden yellow; marginal and postmarginal veins about subequal, each one third longer than the stigmal, which is slightly curved. Thorax with fine, polygonal reticulation, the reticulation in raised lines. Parapsidal furrows faint but complete. Scutellum with an obscure, transverse groove before apex. Propodeum rather short, broad, scaly, without a median carina but there is a shallow lateral sulcus on each side of meson, running obliquely from the cephalic margin, the lateral margin of each sulcus carinated and thus forming the lateral carinæ; spiracle elliptical, with a deep sulcus running obliquely from its caudal margin. Abdomen viewed from the lateral aspect, straight above, convex beneath; viewed from the dorsal aspect, it is conic-ovate, no longer than the thorax; petiole no longer than the hind coxæ; second segment occupying over one third the surface; third and fourth subequal, each about one half as long as the second; fifth and sixth distinctly shorter than the fourth; eighth conical. Head no wider than long, no wider than the thorax. Mandibles 3 and 4-dentate.

Described from one female captured by sweeping in jungle, June 7, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2793, Queensland Museum, Brisbane, the specimen on a tag, the head and a hind leg on a slide.

#### SPHEGIPTEROSEMELLA new genus.

For diagnosis, see *antea* (these Memoirs, II), p. 324. The males have the legs more uniformly fuscous. The *types* are five females on a card, a head, several antennæ and hind legs on a slide. They were reared from bombycid cocoons, April 7, 1911. *Peterosema unicolor* new species is the genotype.

#### GENUS EURYDINOTELLA Girault.

##### 1. EURYDINOTELLA VIRIDICOXA new species.

*Female*:—Length, 1.30 mm. For rest of diagnosis, see *antea* (these Memoirs, II), p. 319.

Described from a female captured by sweeping in forest along the banks of Cape River, December 27, 1913.

##### 2. EURYDINOTELLA PUNCTATA new species.

*Female*:—Length, 1.85 mm.

Like *prima* Girault but the abdomen is not darker than the thorax; the coxæ are concolorous; the pedicel is colored like the flagellum; the scape is golden yellow; the abdominal petiole is short, much shorter than the hind coxæ; the third abdominal segment is slightly shorter than the second and the postmarginal vein is twice as long as the stigmal and as long as the marginal. At once differing from *viridicoxa* Girault in having a punctate propodeum.

Described from one female caught by sweeping in forest and slight jungle, June 27, 1913 (A.A.G.).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2794, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.







## GENUS EURYDINOTA Foerster.

## 1. EURYDINOTA PULCHRA new species of Girault and A. P. Dodd.

*Female*:—Length, 1.60 mm.

Dark metallic blue; coxæ concolorous; rest of legs bright golden yellow; scape yellow; rest of antennæ black. Wings hyaline. Antennæ 13-jointed, with two ring-joints, the club 3-jointed; pedicel a little longer than first funicle joint; funicle joints gradually widening toward the apex; first slightly shorter than second; second and third a little longer than wide; 4-6 somewhat wider than long; first and second club joints about subequal, each somewhat wider than long. Marginal vein fully three times as long as postmarginal; stigmal vein shorter than postmarginal. Thorax densely polygonally reticulated, the reticulation in raised lines; parapsidal furrows incomplete; scutellum simple. Abdomen no longer than the head and thorax united; no wider than the thorax; petiole nearly as long as the hind coxæ; second segment the longest, occupying one third of the surface, a little more than twice as long as third segment; the others all shorter than the third. Propodeum short and broad, with short, distinct spiracular sulci, a short abbreviated median carina and a circular fovea on each side of meson cephalad.

*Male*:—Not known.

Described from one female caught by sweeping on edge of jungle, May 22, 1913 (A. P. Dodd).

*Habitat*:—Kuranda, Queensland.

*Type*: No. Hy 2795, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

## GENUS EURYDINOTELOIDES Girault.

Synonym: *Polycysteloides* Girault.

## 1. EURYDINOTELOIDES FLAVIBASALIS new species.

*Female*:—Length, 2.50 mm.

Agrees with the generic description excepting that the lateral carinæ of the propodeum are entire and there is no cross-carina; there is also a narrow spiracular sulcus.

Dark brassy green, the wings hyaline, the tegulae, knees, tibiae, tarsi, scape and pedicel yellowish brown, the posterior tibiae and tarsi pale; rest of antennæ dusky. Base of abdomen above broadly (somewhat over half of segment 2 dorsad) and the dorsal incisions very narrowly and more or less obscurely, bright yellow. Whole of thorax rather finely, densely punctate. Propodeal spiracle small, round. Funicle joint 1 a little longer than the pedicel; 5 subquadrate; 1 plainly longer than wide and longest of the funicle. Club ovate, without a terminal seta.

Compare *Aplastomorpha flavobasalis*.

Described from one female caught by Mr. F. P. Dodd on flowers in October.

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 2796, Queensland Museum, Brisbane, the specimen on a tag, the head and hind tibiae on a slide.

## GENUS POLYCYSTELLA Girault.

## 1. POLYCYSTELLA ABDOMINALIS new species of Girault and A. P. Dodd.

*Female*:—Length, 1.95 mm.

Differing from the generic description in lacking the sinus on the second abdominal segment; the petiole is twice as long as the hind coxæ; propodeum without a median carina but with complete, delicate lateral carinæ; the spiracle is small; at least one mandible tridentate; and the postmarginal vein is over twice the length of the stigmal and one fourth longer than the marginal.

Dark metallic green, the coxæ concolorous; rest of legs, abdominal petiole and antennal scape golden yellow; rest of antennæ black. Wings hyaline, the venation golden yellow. Thorax (including the propodeum) punctate. Abdomen short, convex above and beneath; the third segment viewed from the side, rising abruptly from the second.

Described from one female caught by sweeping in forest, November, 1912 (A. A. Girault).

*Habitat*: Northern Queensland (Gordonvale near Cairns).

*Type*: No. Hy 2797, Queensland Museum, Brisbane, a female on a tag.

## 2. POLYCYSTELLA PETIOLATA new species of Girault and A. P. Dodd.

*Female*:—Length, 2 mm.

Like *abdominalis* but the lateral carinæ on the propodeum are distinct not delicate; there is a distinct sulcus running obliquely from the caudal margin of the spiracle; the postmarginal vein is no longer than the marginal; the abdominal petiole is metallic; and the fourth segment occupies one half of the surface and is as long as the second and third combined (scarcely longer than the third and not equal to one third of the surface in *abdominalis*). Mandibles not seen; funicle joints subquadrate.

Described from one female caught by sweeping in forest August 4, 1913 (A. A. Girault).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2798, Queensland Museum, Brisbane, the specimen on a tag.

## EURYDINOTOMORPHA new genus.

For diagnosis, see *antea*, p. 320.

### 1. EURYDINOTOMORPHA PAX new species.

A female of this species was caught by sweeping in jungle, Gordonvale, near Cairns, July 31, 1913 (A. P. Dodd). "The legs in this specimen are wholly golden yellow, the coxæ suffused with metallic. In the type, the femora and tibiæ are darker, but not much darker than the tarsi. The median carina of propodeum, in both specimens, is one third complete from base." (A. P. Dodd.)

The pubescence is quite normal.

### 2. EURYDINOTOMORPHA GRANDIS new species.

*Female*:—Length, 4 mm.

Dark metallic brassy green; the abdomen somewhat brownish; coxæ concolorous; femora and antennal scape and pedicel bright brownish yellow; tibiæ and tarsi (except apical joint) white. Wings hyaline, the venation dark. Otherwise like the genotype but the joints of the flagellum are longer and the propodeum has a short neck and lacks the abbreviated median carina.

Described from one female caught by sweeping in jungle, November 15, 1913 (A. P. Dodd).

*Habitat*: Harvey's Creek (near Cairns), Queensland.

*Type*: No. Hy 2799, Queensland Museum, Brisbane, the specimen on a tag, the head and hind legs on a slide.

### 3. EURYDINOTOMORPHA BASALIS new species.

*Female*:—Length, 4.15 mm.

Very similar indeed to *grandis* but differing in that the abdomen ventrad is reddish brown (in *grandis* the middle of the abdomen rather broadly—nearly a third of the surface—dorsad is reddish) and the femora and tibiæ are uniformly rich reddish brown (the tibiæ are white in *grandis*); rest of abdomen dark metallic blue-green. The abdomen dorsad is

very finely transversely lineolated, segment 2 glabrous, segment 3 lineolated only cephalo-laterad, 4 only laterad; similarly sculptured in *grandis* and in the genotype but less densely in the latter; in all three segment 7 is as long as 2; in the genotype, segment 3 is only about half the length of 4, in *grandis* only slightly shorter while in *basalis* 3 and 4 are subequal and more transverse, each somewhat shorter than with *grandis*. In all three, the lateral carinæ are present, with a more or less distinct fovea just mesad of its origin; lateral carina short, curved mesad around the fovea. Pedicel (in *basalis*) wholly black. Antennæ and mandibles as in *grandis*. Segment 7 is pilose dorsad in all three species and all three bear a short neck at apex of the conical propodeum.

Described from one female caught in forest May 22, 1914.

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2800, Queensland Museum, Brisbane, the female on a tag with type of *grandis*.

#### 4. EURYDINOTOMORPHA INCERTA new species.

Same as *pax* but lacks the median carina (*pax* has the middle coxa lemon yellow), the sculpture of the scutellum is denser but especially the parapsides which are scaly punctate, rather coarsely scaly in *pax*; also the tibiæ are white. Differs from *fusciventris* in having the abdomen wholly dark metallic green, the general color of the thorax much more brassy. From *grandis* in having the abdomen of uniform color and from *basalis* in that the abdomen is wholly metallic, the tibiæ and tarsi white, the caudal coxæ metallic only laterad (wholly metallic in *basalis*). In all the species there is a fold passing obliquely across caudad of spiracle and joined to the short lateral carina. Hind tibiæ reddish just below knees. The middle coxæ are like the legs.

From one female caught in jungle, June 3, 1914 (A. P. Dodd).

*Habitat*: Grafton (Clarence River), New South Wales.

*Type*: No. Hy 2801, Queensland Museum, Brisbane, the specimen on a tag; hind tibiæ and head on a slide with slide type of *Aplastomorpha 5-fasciata*.

The genotype measures 3 mm. and was captured October 28, 1911, by sweeping. Its type is a female on a tag and a slide bearing the head and the hind legs.<sup>3</sup>

#### PSEUDOSPHEGIGASTERUS new genus.

For diagnosis, see *antea*, p. 322.

#### 1. PSEUDOSPHEGIGASTERUS FLAVIPES new species of Girault and A. P. Dodd.

*Female*:—Length, 1.90 mm.

Like *æneus* Girault but the legs (including the coxæ) are golden yellow, the antennal scape golden yellow, pedicel and ring-joints brown, rest of antennæ black; second funicle joint a little shorter than first, the fifth longer than wide, not subquadrate. Abdominal segments as in *æneus*. Mandibles plainly 3- and 4-dentate.

Described from one female caught by sweeping in jungle, November 13, 1913 (A. P. Dodd).

*Habitat*: Gordonvale and Harvey's Creek (Cairns), Queensland.

*Type*: No. Hy 2802, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide. Type locality Gordonvale.

A second female was subsequently found labelled "Sweeping in jungle, Harvey's Creek, near Cairns, November 15, 1913 (A. P. Dodd)."

<sup>3</sup> *Antea*, II, p. 320, line 6 of the description of *fusciventris*, *Catolaccus* read *Aplastomorpha*.

**2. PSEUDOSPHEGIGASTERUS ALBIPES** new species of A. P. Dodd and A. A. Girault

*Female*:—Length, 2.70 mm.

Differs from the generic description in bearing an obscure cross-carina on the scutellum and in having complete lateral carinæ on the long propodeum.

Dark metallic green, the abdomen bluish, the legs and antennal scape white, the front coxæ somewhat dusky, pedicel brown, rest of antennæ black.

Wings hyaline; stigmal vein half as long as the postmarginal, the latter distinctly shorter than the marginal. Thorax polygonally reticulate, the reticulation in raised lines, rather coarser between the carinæ of propodeum, the propodeum laterad of the carina, the axillæ and scutellum caudad of the suture very finely scaly. Abdomen rather broader than the thorax, conic-ovate, the second segment occupying about one third of the surface. Mandibles 3- and 4-dentate. Funicle joints all longer than wide, the first distinctly the longer, the fifth as long as the pedicel, the club with a terminal spur.

Described from one female caught in jungle, February 11, 1914 (A. P. Dodd).

*Habitat*: Babinda, Queensland.

*Type*: No. *Hy 2803*, Queensland Museum, Brisbane, a female on a tag; head and hind leg on a slide.

The genotype is a new species. It measures 1.25 mm. and was taken March 12, 1912. The type is on a tag, the head and hind legs on a slide.

## GENUS PARACROCLISIS Girault.

**1. PARACROCLISIS WASHINGTONI** Girault.

The distal three segments of the abdomen dorsad are finely scaly. Type re-examined.

## ACROCLISOIDES new genus of Girault and A. P. Dodd.

*Female*:—Like *Paracroclisis* Girault but the propodeum is short, its spiracles are small and rounded, its lateral carinæ absent; the postmarginal vein is a fourth longer than the marginal, the latter slightly thickened; stigmal vein nearly as long as marginal, straight, with a large round knob; the fourth abdominal segment not twice as long as the second. Also, the petiole is only a little longer than wide. Head very large.

**1. ACROCLISOIDES MEGACEPHALUS** new species of Girault and A. P. Dodd. Genotype.

*Female*:—Length, 1.60 mm.

Head and thorax dark metallic green; first two pairs of coxæ concolorous; rest of legs and antennal scape and pedicel golden yellow, rest of antennæ black; abdomen dark metallic blue. Fore wings hyaline, with an obscure dusky spot just beneath knob of stigmal vein. Head much wider than the thorax, the vertex narrow, the frons directed cephalad, mandibles 4-dentate. Pronotum very short. Parapsidal furrows complete, distinct. Scutellum as in *Paracroclisis*. Propodeum scaly. Abdominal petiole not slender, not as long as hind coxæ; fourth segment occupying a half of the surface (excluding petiole). Antennæ 13-jointed, with two ring and three club joints; pedicel scarcely longer than wide, the first funicle joint distinctly longer than pedicel and twice as long as wide. Funicle not clavate, the joints gradually decreasing in length but the last joint plainly longer than wide; the club as long as the two preceding joints united.







Described from one female caught by sweeping in jungle, November 1, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2804, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

**2. ACROCLISOIDES LATICEPS** new species of A. P. Dodd and A. A. Girault.

*Female*:—Length, 1.75 mm.

Very similar to *megacephalus* but the hind coxæ also concolorous, the fore wings hyaline, the postmarginal vein no longer than the marginal, the pedicel only suffused with yellow, the last three funicle joints yellow, ringed with black apically, the abdomen longer, oval, the fourth segment occupying less than a half of the surface, the abdomen not squarely cut off behind it as in *megacephalus*. All three species have very large, 4-dentate mandibles.

Described from one female caught in forest, January 27, 1914 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2805, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

**3. ACROCLISOIDES MAJOR** new species of A. P. Dodd and A. A. Girault.

*Female*:—Length, 2.50 mm.

Similar to the genotype but much larger, all coxæ concolorous, rest of legs and antennal scape and pedicel lemon yellow, fore wings hyaline; head large but only a little wider than the thorax, the vertex not narrow, mandibles very large, petiole of abdomen yellow, not longer than hind coxæ nor half as long as rest of abdomen, segments 2-4 subequal, the remaining segments very short and hidden; stigmal vein somewhat longer than the marginal and a little shorter than postmarginal; funicle joints longer.

Described from one female caught by sweeping edge of jungle, December 20, 1912 (A. P. Dodd).

*Habitat*: Kuranda, Queensland.

*Type*: No. Hy 2806, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

**EPIPOLYCYSTUS** new genus.

*Female*:—Like *Neopolycystus* Girault but the club lacks the nipple-like fourth joint (or at least it is barely indicated) and is only 2-jointed, the fourth segment of abdomen is a little longer than the second, the third a little shorter, the three combined occupying two thirds of the surface. Also the propodeum is quite different in shape, being conical, very short at the spiracle (in *Neopolycystus* nearly as long from the spiracle as along the meson, the short neck making the difference), long at meson. Segments 2 and 3 of abdomen caudad at meson with very slight notches. Segment 5 of abdomen transverse sublinear, not half the length of segment 4. Antennæ 12-jointed with three ring-joints.

**1. EPIPOLYCYSTUS ASILUS** new species. Genotype.

*Female*:—Length, 1.30 mm.

Dark metallic green, the wings hyaline; all of each leg and the scape yellow-brown, also first two ring-joints which are smaller than the third. Funicle joints more or less equal, enlarging slightly distad, each a little wider than long, the pedicel distinctly longer. Head

and thorax polygonally reticulated, the lines not raised, the propodeum a little smoother. Third ring-joint distinctly larger than the other two.

Described from one female captured on a window, October 25, 1913 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2807, Queensland Museum, Brisbane, the specimen on a tag, the head and a hind leg on a slide.

#### NEOPOLYCYSTELLA new genus.

*Female*:—Similar in all details to *Epipolycystus* Girault but the fifth abdominal segment is not transverse-sublinear but long, longer than the third, over half the length of segment 4 which is longest. Postmarginal vein somewhat shorter than the marginal. Propodeum with lateral carinæ, longer at the spiracle which is situated just above and cephalad of a "gully." Segment 3 of abdomen not half the length of segment 4. Head a little wider than long (cephalic aspect), the antennal club 3-jointed.

##### 1. NEOPOLYCYSTELLA SICARIUS new species. Genotype.

*Female*:—Length, 2.10 mm.

Dark metallic green, the wings hyaline, the coxæ concolorous, the legs reddish brown; abdomen shining, polished; head and thorax uniformly punctate. Pedicel longer than first funicle joint, the antennæ black; funicle 1 longest of the funicle, somewhat longer than wide; funicle 5 quadrate. Club simple.

Described from one female captured by sweeping in the forest, December 2, 1912 (A. P. Dodd).

*Habitat*: Gordonvale (Cairns), Queensland.

*Type*: No. Hy 2808, Queensland Museum, Brisbane, the specimen on a tag, the head on a slide.

#### CRYPTOPRYMNOIDES new genus.

*Female*:—Petiole of abdomen enlarged at base, short, about two thirds the length of the hind coxæ. Antennæ 13-jointed with two ring-joints, the club 3-jointed. Propodeum short, punctate, without carinæ or a neck, the spiracle minute and with an indefinite spiracular sulcus. Segments 2, 4, and 5 of abdomen subequal, longest, segment 2 occupying about a sixth of the surface, 3 shorter than it, the caudal margins of all straight, segment 6 not much shorter than the others. Both mandibles strongly 4-dentate. Parapsidal furrows absent. Pronotum transverse. Scutellum simple. Marginal vein short, the postmarginal and stigmal veins long, the postmarginal slightly longer, the stigmal slightly shorter, than the marginal. Abdomen ovate.

##### 1. CRYPTOPRYMNOIDES RABIOSUS new species. Genotype.

*Female*:—Length, 1.50 mm.

Very dark metallic green, the wings hyaline; antennæ black; legs concolorous, the knees and tarsi (except distal joint) pale. Mandibles with the inmost tooth somewhat truncate. Funicle joints all a little wider than long, subquadrate. Thorax densely polygonally reticulated, the reticulation in raised lines.

Described from one female captured by sweeping miscellaneous vegetation along the Pioneer River, October 19, 1911 (A.A.G.).

*Habitat*: Mackay, Queensland.

*Type*: No. Hy 2809, Queensland Museum, Brisbane, the above specimen on a tag, plus a slide bearing head and a hind leg.